AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1. (Previously Presented) An electrophotographic color printing machine for producing color images, comprising:

means for recording an image on an imaging member;

a first developer unit for developing said image, said first developer unit including a sump for storing a quantity of dry developer material comprised of toner of a first color and carrier material, a member for transporting developer material from said sump, said sump including a viewing window, in communication with developer material, in said sump, an optical sensor, device for measuring reflected light off developer material, a first auger for flowing developer across said viewing window; and means for generating a signal indicative of the toner concentration in said sump, said optical sensor including a light source and a light detector, said light source emitting light at a first predefine wavelength based upon said toner of said first color; and

a second developer unit for developing said image, said second developer unit including a sump for storing a quantity of dry developer material comprised of toner of a second color and carrier material, a member for transporting developer material from said sump, said sump including a viewing window, in communication with developer material, in said sump, an optical sensor, device for measuring reflected light off developer material, a second auger for flowing developer across said viewing window; and means for generating a signal indicative of the toner concentration in said sump, said

optical sensor including a light source and a light detector, said light source emitting light at a second predefine wavelength based upon said toner of said second color.

2. (Original) The electrophotographic color printing machine of claim 1, wherein said first color and second color are selected from the group consisting of cyan, magenta, yellow, black, and custom colors.

3. (Original) The electrophotographic color printing machine of claim 2, wherein said first predefined wavelength is between 400 and 500 nm or 750 and 850 nm when said first color is cyan.

4. (Original) The electrophotographic color printing machine of claim 2, wherein said first predefined wavelength is between 500 and 800 nm when said first color is yellow.

5. (Previously Presented) The electrophotographic color printing machine of claim 2, wherein said first predefined wavelength is between 600 and 800 nm when said first color is magenta.

6. (Original) The electrophotographic color printing machine of claim 2, wherein said first predefined wavelength is between 800 and 1000 nm when said first color is black.

7. (Original) The electrophotographic color printing machine of claim 1, wherein said source comprises a LED and said light detector comprises a Si photodiode.

8. (Original) The electrophotographic color printing machine of claim 7, further comprising a toner concentration controller includes means for correlating measurements from said optical sensor to a toner concentration measurement.

9. (Original) The electrophotographic color printing machine of claim 8, wherein said toner concentration controller determines said toner concentration measurement based upon the following equation:

$$\%TC_i = C_i \times \int_{\lambda_0}^{\lambda_1} R_{PD}\, E_i\, R_i\, d\lambda$$

Where

i = C, M, Y, K

RPD is the normalized spectral responsively of the photodiode.

Ei is the normalized spectral density of the i LED.

Ci is a constant containing (a) optical path factors, (b) peak responsivity of the photodiode, (c) peak responsivity of the LED, and (d) conversion factor from reflectivity to %TC.

10. (Previously Presented) An electrophotographic color printing machine for producing color images, comprising:

means for recording an image on an imaging member;

a first developer unit for developing said image, said first developer unit including a sump for storing a quantity of developer material comprised of toner of a first color and carrier material, a member for transporting developer material from said sump, said sump including a viewing window, in communication with developer material, in said sump, an optical sensor, device for measuring reflected light off developer material, and means for generating a signal indicative of the toner concentration in said sump, said optical sensor including a light source and a light detector, said light source emitting light at a first predefine wavelength based upon said toner of said first color;

a second developer unit for developing said image, said second developer unit including a sump for storing a quantity of developer material comprised of toner of a second color and carrier material, a member for transporting developer material from said sump, said sump including a viewing window, in communication with developer material, in said sump, an optical sensor, device for measuring reflected light off developer material, and means for generating a signal indicative of the toner concentration in said sump, said optical sensor including a light source and a light detector, said light source emitting light at a second predefine wavelength based upon said toner of said second color; and

a toner concentration controller includes means for correlating measurements from said optical sensor to a toner concentration measurement, said toner concentration controller determines said toner concentration measurement based upon the following equation:

$$\%TC = K_i \times V_i$$

Where

Ki is a constant containing all the parameters for the particular colored developer and LED set, and Vi is the voltage reading from the photodiode.

11. (Previously Presented) The electrophotographic color printing machine of claim 8, wherein said toner concentration controller adapted to receive a signal from said sensor and to generate an "add toner" signal to replenish toner in said sump to maintain a predefine toner concentration.

12. (Original) The electrophotographic color printing machine according to claim 1, wherein said viewing window comprises a glass window.

13-21. (Cancelled)